

REMARKS

Claims 4-25 are currently pending. Claim 4 has been amended. Claims 9-25 have been newly added. Support for the amendments of Claim 4 may be found, for example, in the Examples of the Specification, in which each solution does not include a separate inorganic salt.

I. The Rejection Based on Laguitton

Claims 4-8 are rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Laguitton (US 6,689,478).

Applicants respectfully submit that the present invention is not anticipated by the disclosures of Laguitton and request that the Examiner reconsider and withdraw this rejection in view of the following remarks.

In the present invention, polyelectrolytes include both water-soluble polymers and salts of water-soluble polymers, such as polyacrylic acid, polymethacrylic acid, polyallylamine hydrochloride, polydimethyldiallylammonium chloride, etc.

In the Examples 2 to 4 of the present invention, an aqueous polyallylamine solution with pH 3.5 or 5.0 was used. In Examples 2 to 4, the aqueous polyallylamine solution included polyallylamine hydrochloride (i.e., salt of water-soluble polymer).

Examples 2 to 4 of the present invention disclose, “these procedures were repeated alternately ten times to form an alternating multilayer film” (Example 2); “This was repeated alternately 2.5 times to give an alternating multilayer film” (Example 3); and “This was repeated alternately 4.5 times to give an alternating multilayer film” (Example 4). That is, in the Examples 2 to 4 of the present invention, alternating 5 to 20 layers were formed on the support.

Claims 4 and 23

Laguitton discloses that a charged film is deposited in solution of a polyelectrolyte mixed with inorganic salt such as sodium chloride, magnesium chloride, calcium chloride, etc. (Laguitton claim 12). Laguitton also discloses that the charged film deposited in solution of salt, such as sodium salt of poly(styrenesulfonate), poly(allylamine hydrochloride), etc., creates a problem for use (Laguitton column 2).

On the other hand, the electrolyte thin film of the immobilization support of Claim 4 is formed by using a solution comprising at least one selected from a group consisting of a water-soluble polymer and a salt of water-soluble polymer but excluding an inorganic salt. Moreover, the electrolyte thin film of the immobilization support of Claim 23 comprises at least one layer formed by using a solution comprising a salt of water-soluble polymer.

Additionally, although Laguitton discloses multilayer thin films deposited in solution of salt, such as sodium salt of poly(styrene sulfonate), poly(allylamine hydrochloride), etc., as prior art (Figs 1A to 1F), these multilayer thin films do not comprise “alternating layers, containing at least three layers, of a polyamionic thin film and a polycationic thin film so that the uppermost layer is a polycationic thin film”.

Claim 16

Laguitton does not disclose a substrate having a charged film as an adsorbing film for binding a protein, wherein the electrolyte thin film comprises alternating layers of a polyallylamine thin film and polyacrylic acid thin film so that the uppermost layer is a polyallylamine thin film.

Amendment Under 37 C.F.R. §1.111
Application No.: 10/527,805

For the above reasons, it is respectfully submitted that the subject matter of claims 4-25 is neither taught by nor made obvious from the disclosures of Laguitton and it is requested that the rejection under 35 U.S.C. §102 be reconsidered and withdrawn.

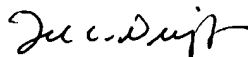
II. Conclusion

In view of the above, Applicants respectfully submit that their claimed invention is allowable and ask that the rejection under 35 U.S.C. §102 be reconsidered and withdrawn. Applicants respectfully submit that this case is in condition for allowance and allowance is respectfully solicited.

If any points remain at issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the local exchange number listed below.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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